Massachusetts Institute of Technology
15.S50 - Poker Theory and Analytics

IAP 2015

## Case 3

Issued: Friday, January 23, 2015
Due: Friday, January 30, 2015

Notes: This case contains twelve (12) questions and are labeled as (1.1) through (2.5). Please answer all questions concisely and show all work. State any assumptions you are making. This case is graded pass/fail where a passing grade is $7 / 12$ points. Partial credit will be awarded for incorrect answers with appropriate work shown. Using approximations is acceptable. These questions rely on PokerTracker's ICM Calculator, or an equivalent ICM calculator.

Scenario: It is Thursday, July 3, 2014 and you are playing in a $\$ 550$ Mega Satellite to the WSOP Event $\# 68$ : $\$ 10,000$ NLHE Main Event. The structure of this tournament is that 1 in 20 players wins a $\$ 10,000$ ticket to the main tournament. There were 140 entries and the top 7 players will win tickets. There are 60 players remaining in the tournament.

The table is 9-handed as follows. Blinds are 1000/2000 with 300 ante.

| Seat | Name | Chip Count |
| :---: | :---: | :---: |
| 1 | Hero | 40,000 |
| 2 | UTG | 160,000 |
| 3 | UTG +1 | 140,000 |
| 4 | MP1 | 114,000 |
| 5 | MP2 | 154,000 |
| 6 | LP | 76,000 |
| 7 | CO | 168,000 |
| 8 | BTN | 182,000 |
| 9 | SB | 160,000 |

Question 1:
Prior to this hand, you have developed an image of being very tight, and as a result you are facing a raise every time you are in the BB. As a short stack, losing this BB every round is painful are you are looking to defend your blind. Assume each steal attempt is a raise of 3BB and the Villains are stealing with any two cards.

What is your M? (1.1)

If you decide to re-raise to 6 BB , what odds does the Villain have to call if he is the BTN? (1.2)

Given that he has a range of ATC, what would your range have to be to make this a bad call for him? (1.3)

If the Villain re-raises all-in, what odds would you have to call? (1.4)

If you raise the maximum instead of 3BB, what odds does the Villain have to call? (1.5)

If you have QTo and re-raise all-in, do you prefer a call or a fold? Assume Villain will call with any two cards. (1.6)

Question 2:
You reached the final table of the satellite and there are 8 players remaining to win seven $\mathbf{\$ 1 0 , 0 0 0}$ tickets. Everyone values the tickets at $\mathbf{\$ 1 0 , 0 0 0}$ (they are indifferent to playing the Main Event if they win the satellite). You view yourself as an approximately average player compared to the remainder of the table. The chip stacks are as follows:

Blinds are 8000/16000 with 2000 ante.

| Seat | Name | Chip Count |
| :---: | :---: | ---: |
| 1 | Hero | 66,000 |
| 2 | UTG | 13,000 |
| 3 | UTG+1 | 80,000 |
| 4 | MP1 | 30,000 |
| 5 | MP2 | 31,000 |
| 6 | LP | 73,000 |
| 7 | BTN | 49,000 |
| 8 | SB | 78,000 |

Per PokerTracker, what is our \$EV in this tournament? If a chop (prize split) is offered and each player will get $\$ 9,000$, should you take it? (2.1)

You have A And SB open pushes all-in with ATC. What is your chip EV from calling? (2.2)

What is your \$EV from calling? Should you call? (2.3)

What is the \$EV loss from doing the wrong action? (2.4)

The following hand, it is folded to you in the SB and the BB (seat 2) is forced allin. What range should you call? Assume you folded the previous hand. (2.5)

What is the \$EV of calling optimally? (2.5)

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